

Application/Control No.: 10/578,801
Examiner: Lori Baker Amerson

CLAIMS

1. (currently amended): Exercise apparatus for exercising lower limbs, in particular for exercising lower limbs to perform a cyclic muscular exercise, or consisting of an alternating succession of concentric and eccentric steps, characterised in that it comprises said exercise apparatus comprising a carrying structure (12), to which at least one seat for the user (13) and a support and guide member (14) of to which two footboards (15), or support bases for feet, are constrained attached, as well as and having an actuator (16) connected to said support and guide member (14) of the footboards (15), wherein said support and guide member (14) is constrained attached to the carrying structure (12) by a pin or fulcrum (17) and is said support and guide member being adapted for performing a hunting motion rotation on a plane at least on one side relative to a longitudinal axis of the apparatus, said footboards (15) describing having a curvilinear trajectory around the fulcrum (17).

2. (currently amended): Apparatus according to claim 1, characterised in that wherein said plane is horizontal.

3. (currently amended): Apparatus according to claim 1, characterised in that wherein said support and guide member (14) of the footboards (15) comprises at least one bar, which forms a lever arm, connected at a first opposed end[[s]] to the carrying structure (12) in said by fulcrum (17) as well as and at a second opposed end to said footboards (15), respectively.

4. (currently amended): Apparatus according to claim 1, characterised in that wherein said footboards (15) are turnably fixed to at least one support plate (18) by an articulated joint (19) which allows their rotation around their said footboards to rotate around an axis.

5. (currently amended): Apparatus according to claim 4, characterised in that wherein said plate (18) is connected to the support and guide member (14) of the footboards (15) by a shaft or connecting element (23).

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6. (currently amended): Apparatus according to claim 4, characterised in that wherein said articulated joint (49) imposes an adjustment and a restriction to the rotation of the footboards (15).

7. (canceled)

8. (currently amended): Apparatus according to claim 5, characterised in that wherein said support plate (18) is free to rotate around the axis of the shaft (23).

9. (currently amended): Apparatus according to claim 1, characterised in that wherein said actuator (16) is connected in an articulated manner at opposed ends to said carrying structure (12) and to said support and guide member (14) of the footboards (15), respectively.

10. (currently amended): Apparatus according to claim 1, characterised in that wherein said actuator (16) is a pneumatic piston moving inside a cylinder.

11. (currently amended): Apparatus according to claim 1, characterised in that wherein said actuator (16) is connected to the support and guide member (14) of the footboards (15) by a connecting element (21), the position of said element (21) being adjustable relative to the member (14).

12. (currently amended): Apparatus according to claim 1, characterised in that wherein said actuator (16) exerts a variable and adjustable power.

13. (currently amended): Apparatus according to claim 1, characterised in that wherein said actuator (16) has an adjustable stroke.

14. (canceled)

15. (canceled)

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16. (canceled)

17. (currently amended): Apparatus according to claim 4, ~~characterised in that it comprises comprising~~ adjustable locking means (44) for locking said support plate[[s]] (18) of the footboards during the exercise at a fixed angle relative to a longitudinal axis of the apparatus.

18. (currently amended): Apparatus according to claim 17, ~~characterised in that wherein~~ said locking means comprises an additional bar (44) hinged to said carrying structure (12) and to said at least one support plate (18) of the footboards (15), said additional bar (44) being arranged parallel relative to said support and guide member (14) for keeping said at least one support plate (18) at a fixed angle relative to a longitudinal axis of the apparatus during the exercise.

19. (currently amended): Apparatus according to claim 18, ~~characterised in that wherein~~ said additional bar (44) has an adjustable height.

20. (currently amended): Apparatus according to claim 4, ~~characterised in that wherein~~ said footboards (15) are connected to one another by a bar (43).

21. (currently amended): Apparatus according to claim 4, ~~characterised in that wherein~~ each of said footboards (15) comprises a frame (41) connected by said articulated joint (19) to a top plate (18) and to a bottom plate (18) integral to one another, as well as a support surface (42) for the foot, hinged to said frame (41) according to a horizontal axis.

22. (currently amended): Apparatus according to claim 5, ~~characterised in that wherein~~ it comprises a braking device (45) for restricting the relative rotation motion around said shaft (23) between said support and guide member (14) of the footboards (15) and said at least one support plate (18) of the footboards (15).

23. (currently amended): Apparatus according to claim 22, ~~characterised in that wherein~~ said braking device (45) comprises a disc (46) adapted for being pressed

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against said at least one plate (18) by an adjustable stem (47).

24. (currently amended): Apparatus according to claim 1, ~~characterised in that it~~
~~comprises comprising~~ an electronic control system for said actuator (16).

25-26. (canceled)